

Date: Wednesday, 26/11/2008 11:18:58 AM
 User: Chantal Lavoie

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BRACKET ASSEMBLY
Job Number : 42190	
Estimate Number : 10279	
P.O. Number :	Part Number : D3121143
This Issue : 26/11/2008 S.O. No. :	Drawing Number : D3121 REV E
Prsht Rev. : NC	Project Number : N/A
First Issue : 22/09/2008 Type : MACHINED PARTS	Drawing Revision : E
Previous Run : 40343	Material :
Written By :	Due Date : 25/10/2008 Qty: 25 Um: Each
Checked & Approved By :	
Comment : Est Rev: Pick: A 04.02.18 New issue KJ/DS	
Est Rev: B ECN 1060 07-11-12 DD verified by: EC	
Est Rev: C New Dimensions for Blank Size 08-07-23 JLM Verified	
By: EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M174B1250X02000	17-4 SS Bar 1.250 x 2.00
-----	-----------------	--------------------------



Comment: Qty.: 0.3864 f(s)/Unit Total: 9.6600 f(s)

Material: 17-4 SS Bar per AMS 5604/5643

(M17-4-B1.250x02.000)

Identify for D3121-113

Batch: m109021

mmf 08/09/24

(25)

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW

Cut blanks: (1.000" x 2.000") 4.425" long

mmf 08/09/24

(25)

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
-----	-------	--------------------------------



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3121-113 as per Folio FA330 and Dwg D3121

Identify as D3121-113

2-Deburr

3-Scribe batch number

mmf 08/11/24

25

Date: • Wednesday, 26/11/2008 11:18:58 AM
User: • Chantal Lavoie

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 42190

Part Number: D3121143

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

mk 08/11/24

(25)

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

M.A 08/11/24

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-21

Bolt

B42201

Ep 08/12/02

7.0

D3121241

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-241 Bearing Ass

B42177

Ep 08/12/02

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble D3121-143 as per Dwg D3121.

Ep 08/12/02

(25)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/12/02

center

(25)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

ST 233

JS 08/12/03

(25)

Date: , , Wednesday, 26/11/2008 11:18:58 AM
User: , , Chantal Lavoie

Process Sheet

• Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 42190

Part Number: D3121143

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/04 *[Signature]*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



u 08.12.04

Date: Monday, 22/09/2008 2:00:30 PM
 User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
Job Number : 42190
Estimate Number : 10279
P.O. Number :
This Issue : 22/09/2008 **S.O. No.** :
Prsht Rev. : NC
First Issue : / / **Type** : MACHINED PARTS
Previous Run : 40343
Written By : W
Checked & Approved By :
Comment : Est Rev: Pick: A 04.02.18 New issue KJ/DS
 Est Rev: B ECN 1060 07-11-12 DD verified by: EC
 Est Rev: C New Dimensions for Blank Size 08-07-23 JLM Verified
 By: EC

Drawing Name : BRACKET ASSEMBLY
Part Number : D3121143
Drawing Number : D3121 REV E
Project Number : N/A
Drawing Revision : E
Material :
Due Date : 25/10/2008 **Qty:** 25 **Um:** Each

Additional Product

Job Number:



Seq. #: **Machine Or Operation:** **Description :**

1.0 M174B1250X02000 17-4 SS Bar 1.250 x 2.00



(25)

Comment: Qty.: 0.3864 f(s)/Unit Total: 9.6600 f(s)
 Material: 17-4 SS Bar per AMS 5604/5643
 (M17-4-B1.250x02.000)
 Identify for D3121-113
 Batch: 1109021

min = 08/09/24

2.0 BAND SAW BAND SAW



(25)

Comment: BAND SAW
 Cut blanks: (1.000" x 2.000") 4.425" long

min = 08/09/24

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3121-113 as per Folio FA330 and Dwg D3121
 Identify as D3121-113

2-Deburr

3-Scribe batch number

Issue 1.0 7241
 Globus

C 208/09/24

(25)

min = 08/09/24

(25)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3121-143 PAR #: N/P Fault Category: Prodr Machine NCR: Yes No DQA: 1A Date: 08.12.04
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: ✓ Date: 08/12/04

NCR: <u>42190</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>08/11/23</u>	<u>3</u>	<u>2 pieces scrap.</u> <u>the drill broke inside the</u> <u>the hole, and the second</u> <u>part the tip broke.</u> <u>R.C. process/operation</u> <u>drill bit just broke??</u>	<u>[Signature]</u> <u>05/11/23</u>	<u>scrap and destroy</u> <u>and replace</u> <u>Qty 2 Batch: 17109021</u>	<u>[Signature]</u> <u>08/11/23</u>	<u>[Signature]</u> <u>08/11/24</u>	<u>[Signature]</u> <u>05/11/23</u>	<u>[Signature]</u> <u>08-11-24</u>

NOTE: Date & initial all entries

Date: Monday, 22/09/2008 2:00:30 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 42190

Part Number: D3121143

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC2



Receive + inspect for burst damage
Ensure CS is attached

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

mk 08/11/24

(25)

5.0

QC5



SECOND CHECK



Comment: SECOND CHECK

inspect level 5

U.A 08/11/24

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-21

Bolt

B42201

7.0

D3121241

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-241 Bearing Ass

B42177

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3121-143 as per Dwg D3121.

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

ST 233

AS 08/12/03 (25)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 22/09/2008 2:00:30 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 42190

Part Number: D3121143

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion —



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

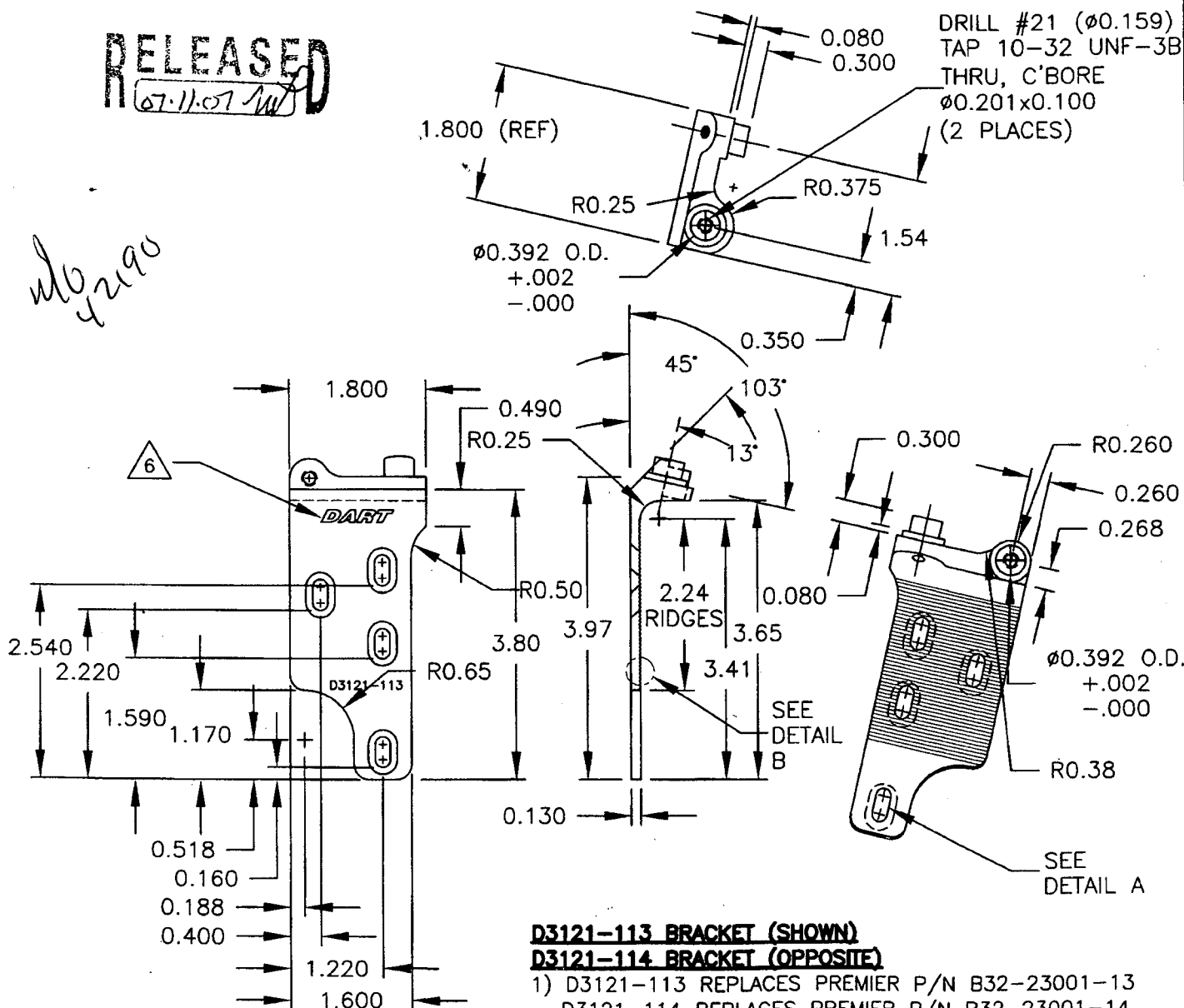
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN #	DRAWN BY LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. E SHEET 8 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

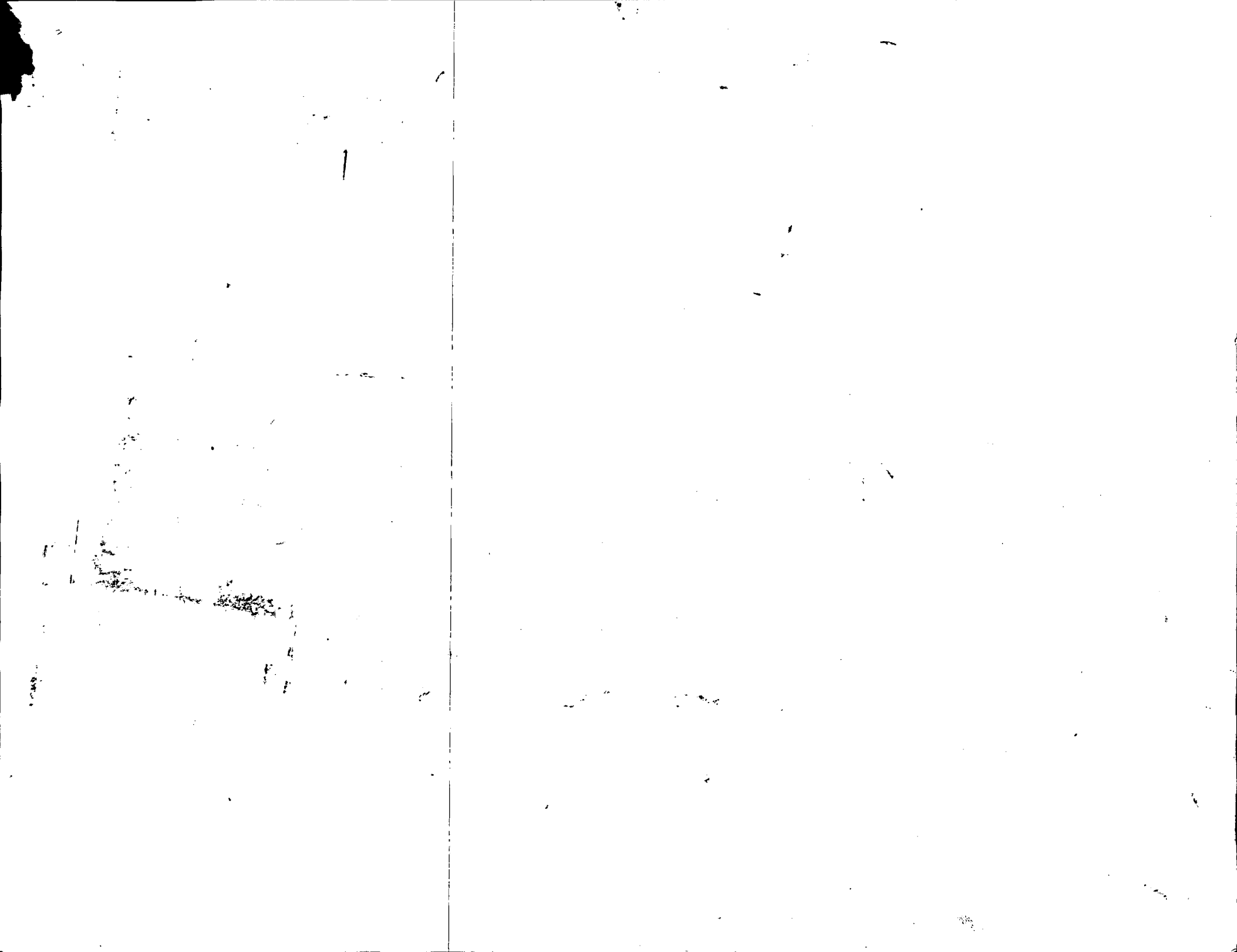
RELEASED
07.11.07 W

D3121-113 BRACKET (SHOWN)
D3121-114 BRACKET (OPPOSITE)

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
D3121-114 REPLACES PREMIER P/N B32-23001-14
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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DART AEROSPACE LTD		Work Order:	42190
Description: BRACKET		Part Number:	D3121-173
Inspection Dwg: D3131 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	X	Prototype
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[illegible]

Measured by:	<i>Jim</i>	Audited by:		Prototype Approval:	
Date:	08/11/24	Date:		Date:	

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DART AEROSPACE LTD		Work Order: 43486
Description: Bracket		Part Number: D3121-113
Inspection Dwg: D3121 Rev: E		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.080	+/-0.010	.079	✓			
0.300	+/-0.010	.298	✓			
R0.375	+/-0.010	R.375	✓			
1.54	+/-0.030	1.539	✓			
0.350	+/-0.010	.353	✓			
R0.25	+/-0.030	R.250	✓			
Ø0.392	+0.002/-0.000	Ø.3933	✓			
Ø0.201	+0.005/-0.000	Ø.201	✓			
2.540	+/-0.010	2.541	✓			
1.590	+/-0.010	1.590	✓			
0.160	+/-0.010	.160	✓			
0.400	+/-0.010	.396	✓			
1.220	+/-0.010	1.216	✓			
1.600	+/-0.010	1.603	✓			
3.80	+/-0.030	3.800	✓			
1.800	+/-0.010	1.801	✓			
R0.50	+/-0.030	R.500	✓			
0.130	+/-0.010	.130	✓			
3.41	+/-0.030	3.385	✓			
3.65	+/-0.030	3.625	✓			
2.24	+/-0.030	2.210	✓			
45°	+/-0.1°	45°	✓			
R0.25	+/-0.030	R.250	✓			
3.97	+/-0.030	3.972	✓			
R0.38	+/-0.030	R.380	✓			
Ø0.392	+0.002/-0.000	Ø.3933	✓			
Ø0.201	+0.005/-0.000	Ø.201	✓			
0.268	+/-0.010	.268	✓			
R0.260	+/-0.010	R.260	✓			
0.080	+/-0.010	.077	✓			
0.300	+/-0.010	.302	✓			
0.381	+/-0.010	.380	✓			
0.201	+/-0.010	.201	✓			
0.580	+/-0.010	.580	✓			

DART AEROSPACE LTD		Work Order:	H3480
Description: Bracket		Part Number:	D3121-113
Inspection Dwg: D3121 Rev: E		Page 2 of 2	


FIRST ARTICLE INSPECTION CHECKLIST

x

First Article

Prototype

[illegible]

Measured by:		Audited by:	B. A	Prototype Approval:	N/A
Date:	08/11/24	Date:	08/11/24	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.12.08	New Issue P/O D3121-143	KJ/RF	
B	04.05.05	Dimensions changed/re-arranged per Dwg revision	KJ/JLM	
C	06.06.14	Dwg Rev. updated	KJ/JLM	
D	08.01.16	Dimensions updated per Dwg Rev. E	KJ/EC/DD	